

## CLAIMS:

1. A method of increasing the data transmission rate between at least one base station and one mobile station in a mobile radio system, in which the data to be transmitted between the at least one base station and the mobile station are transmitted in combined fashion over a first frequency channel and at least a second frequency channel.

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2. A method as claimed in claim 1, characterized in that the data to be transmitted are transmitted over the at least two frequency channels in packets provided with an address coding value, as a result of which the data can be combined again at some later time.

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3. A method as claimed in claim 1, characterized in that the mobile radio system is a GSM, a PCS or a PCN system.

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4. A method as claimed in claim 1, characterized in that the data transmission takes place simultaneously over the first and the second frequency channel.

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5. A method as claimed in claim 1, characterized in that the first frequency channel is a 900 MHz frequency channel and the second frequency channel is selected from a group which consists of the 1800 MHz frequency channel and the 1900 MHz frequency channel.

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6. A mobile radio system for mobile communication comprising at least one base station and one mobile station in which the data transmission takes place in combined fashion to increase the data transmission rate between at least one base station and the mobile station over a first frequency channel and at least a second frequency channel.

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7. A mobile station for use in a mobile radio system for mobile communication comprising at least one base station of the GSM system, comprising a receiving unit for receiving data from the at least one base station in combined fashion over a first frequency channel and at least a second frequency channel.

8. A base station for use in a mobile radio system for mobile communication with a mobile station, in which the base station is arranged for transmitting data to the mobile station, the transmission of data to the mobile station being carried out in combined fashion  
5 over a first frequency channel and a second frequency channel.
9. A computer program for controlling a data transmission between at least one base station and a mobile station in mobile radio systems to increase the data transmission rate, the computer program containing indications for the at least one base station and the  
10 mobile station so that the data to be transmitted between the at least one base station and the mobile station are transmitted over a first frequency channel and at least over a second frequency channel.